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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/683,937	10/10/2003	Yihwan Kim	APPM/8538/TSG/EPI/RKK	2191
44257	7590	02/25/2005	EXAMINER	
MOSER, PATTERSON & SHERIDAN, LLP/ APPLIED MATERIALS, INC. 3040 POST OAK BOULEVARD, SUITE 1500 HOUSTON, TX 77056			TRINH, MICHAEL MANH	
			ART UNIT	PAPER NUMBER
			2822	

DATE MAILED: 02/25/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

AK

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/683,937	KIM ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Michael Trinh	2822	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 30 Days ~~MONTHS~~ FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 24 January 2005 for IDS.
- 2a) ☐ This action is FINAL.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-42 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☐ Claim(s) \_\_\_\_\_ is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☒ Claim(s) 1-42 are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                        | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)    | Paper No(s)/Mail Date. _____  |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____   | 6) <input type="checkbox"/> Other: _____                                    |

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### Part III DETAILED ACTION

\*\*\* This application is in response to filing of the application on October 10, 2003.

\*\*\* Note that there are only 3 sheets of IDS filed on October 10, 2003, although the last IDS sheet is indicated as "sheet 3 of 4 sheets". Confirmation and verification are respectfully requested in response to this office action in order for timely consideration of any missing IDS.

#### *Election/Restriction*

1. Restriction to one of the following inventions is required under 35 U.S.C. § 121:

I. Claims 1-27,42, drawn to a method of depositing a silicon-germanium film including a deposition gas comprising  $\text{SiH}_4$ ,  $\text{GeH}_4$ ,  $\text{HCl}$ , a carrier gas and at least one dopant gas, classified in class 438, subclass 481.

II. Claims 28-40, drawn to a method of depositing a silicon containing film including a deposition gas comprising  $\text{SiH}_4$ ,  $\text{HCl}$ , a carrier gas and growing the film at a rate between about  $50\text{\AA}/\text{min}$  and about  $600\text{\AA}/\text{min}$ , classified in class 438, subclass 607.

making a semiconductor device, which method including, classified in Class 438, subclass .

III. Claim 41, drawn to a method of growing a silicon-containing film including depositing a silicon-containing film using a deposition gas comprising  $\text{Si}_2\text{SiH}_2$ ,  $\text{HCL}$ , and depositing a second silicon-containing layer on the silicon-containing film by using a deposition gas comprising  $\text{SiH}_4$ ,  $\text{HCl}$ , a second carrier gas, classified in class 438, subclass 652.

Currently, there is no generic claim. Group I invention to Group III invention are species and distinct, each from the other, because the method of Group I invention draws to deposit a silicon-germanium film including a deposition gas comprising  $\text{SiH}_4$ ,  $\text{GeH}_4$ ,  $\text{HCl}$ , a carrier gas and at least one dopant gas; while Group II invention differently draws to deposit a silicon containing film including a deposition gas comprising  $\text{SiH}_4$ ,  $\text{HCl}$ , a carrier gas and growing the film at a rate between about  $50\text{\AA}/\text{min}$  and about  $600\text{\AA}/\text{min}$ ; and while Group III invention differently draws to grow a silicon-containing film including depositing a silicon-containing film using a deposition gas comprising  $\text{Si}_2\text{SiH}_2$ ,  $\text{HCL}$ , and depositing a second silicon-containing layer on the silicon-containing film by using a deposition gas comprising  $\text{SiH}_4$ ,  $\text{HCl}$ , a second carrier gas.

Because these inventions are species and distinct for the reasons given above and have acquired a separate status, the fields of search are not co-extensive and separate examination would be required, restriction for examination purposes as indicated is proper.

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Applicant is required under 35 U.S.C. 121 to elect a single disclosed species, even though this requirement is traversed. Should applicant traverse on the ground that the species are not patentably distinct, applicant should submit evidence or identify such evidence now of record showing the species to be obvious variants or clearly admit on the record that this is the case. In either instance, if the examiner finds one of the inventions unpatentable over the prior art, the evidence or admission may be used in a rejection under 35 U.S.C. 103(a) of the other invention.

Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a petition under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

\*\*\*\*\*

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael M. Trinh whose telephone number is (571) 272-1847. The examiner can normally be reached on M-F: 8:30 Am to 5:00 Pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Amir Zarabian can be reached on (571) 272-1852. The fax phone numbers for the organization where this application proceeding is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

-Oasc-



Michael Trinh  
Primary Examiner